



**Sit. Rep. #15
18 February 2008
US AMLR Field Station
Cape Shirreff, Livingston Island, Antarctica**

Seabirds

1. Chinstrap penguins in the colony have completed crèche formation. Of the nests in our reproductive study, 19% crèched at least one chick and 81% failed. The peak of crèche formation was on Feb 5. The average age of chicks when first crèched is 34 days old and 0.22 chicks crèched per nest.

2. In addition to the reproductive study, we also follow the fate of 50 chinstrap nests in a manner that minimizes disturbance to the birds. These sites had a similar rate of productivity to our reproductive sites: 12% of nests in the non-disturbance sites crèched at least one chick and 88% have failed, 0.2 chicks crèched per nest.



3. Gentoo penguin nests in our reproductive study have almost all reached the crèche stage as well. To date, 40% of nests have crèched at least one chick, 2% are still brooding chicks and 58% have failed.

4. On February 12 we conducted our annual chinstrap chick census. We counted a total of 1135 chicks. This is 84% lower than the previous eleven year average of 6982 chicks and 79% lower than last years count of 5299 chicks. Overall reproductive success from the census data is 0.37 chicks crèched per nest.

5. On February 14, we banded chinstrap chicks with the help of our Chilean colleagues. Due to the unusually low number of chicks in the colonies, we banded only 250 this year, half the number that is normally banded at Cape Shirreff. In the future, resights of these birds will be used to determine cohort survival.

6. On Feb 13 we deployed 15 satellite transmitters and 14 time depth recorders on gentoo and chinstrap penguins. These instruments will give us foraging locations and diving profiles of adult penguins that are feeding crèched chicks.

Pinnipeds

7. We continue to lose attendance pups to leopard seal predation. Currently we have 14 female/pup pairs remaining in our attendance study. Thirteen of the original 28 pairs have likely lost their pups to leopard seal predation.

8. Fur seal diet sampling continued this week with the collection of 10 scat samples from areas of suckling females. We transferred 20 scats to the ship for processing.



9. Fur seals tagged as pups continue to arrive. We have seen the following percent return for the last ten year classes:
(1997) 1.2%;
(1998) 1.2%;
(1999) 6.2%;
(2000) 2.6%;
(2001) 4.4%;
(2002) 2.2%;
(2003) 0.8%;
(2004) 0.0%;
(2005) 4.2%; and
(2006) 2.4%. A total of 126

different known-age individuals have been seen so far.

10. We have flipper and PIT tagged 65 pups of tagged adult females this season. This week we have collected 15 more DNA samples from pups of tagged females bringing the total to 143.

11. This week we have seen a few new leopard seals that had been tagged previously on the Cape. We have seen 13 different tagged leopard seals this season. All but one was tagged here.

Cape Shirreff Weather for the Week

12. This week was one of the rainiest we have had with an accumulation of 0.68 inches over the week. Surprisingly, it did not rain during penguin chick banding which made the experience more pleasant for all involved.

13. Temperatures were warmer on average than in the past several weeks, with a mean of 2.9 degrees Celsius, a high of 5.7 and a low of 0.4. Winds averaged 10.4 mph and our highest gust was 38 mph.

Field Station Notes

14. The *R/V Yuzhmorgeologiya* stopped at camp on 15 Feb to collect samples of fur seal scats. They also re-supplied our fresh food stores; all in camp are happy to be eating fresh fruits and vegetables. We will next see the ship at the end of their second leg of survey when they come to close camp.

15. A Chilean navy ship also stopped at Cape Shirreff on 15 February to drop off two logistical personnel. They will assist our Chilean colleagues with preparation for their camp closing in another week.



Report submitted by AMLR researchers currently consuming freshies at the Cape Shirreff field station on Livingston Island. These reports are posted at <http://swfsc.noaa.gov/aerd-field.aspx>. Photos by M. Goebel (NMFS/AERD) and Dan Costa (UCSC).